

## 12/05/13    Agenda

- Warm Up
- Review Homework from Tuesday (after quiz Worksheet)
- Agenda for rest of Semester - **MAP Testing tomorrow!**
- Review Quiz from Tuesday
- Section 5.3 day 1
  - Intro to Slope-Intercept Form of a Linear Equation
- Homework - Worksheet 5.3 day 1

Warm Up: Homework Out (after quiz worksheet)

Find the slope of the line connecting the two points:

$$-4+3 \quad -6+8$$

$$(-4, -6) \quad (-3, -8)$$

$$= \frac{(-3 \quad -8)}{}$$

$$\frac{-1 \quad 2}{-1} = \frac{2}{-1} = -2$$

$$\frac{y_2 - y_1}{x_2 - x_1} = m$$

$$\begin{matrix} x_1 & y_1 & x_2 & y_2 \\ (8, 3) & (-11, 3) \end{matrix}$$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 3}{-11 - 8} = \frac{0}{-19}$$



## Agenda for Rest of Semester 1

### December

			<b>05</b> <b>5.3 day 1</b>	<b>06</b> <b>MAP</b> <b>Testing</b>
<b>09</b> <b>5.3 day 2</b>	<b>10</b> <b>5.3 day 3</b>	<b>11</b> <b>5.3 day 4</b>	<b>12</b> <b>Quiz</b> <b>5.1-5.3</b>	<b>13</b> <b>Review</b> <b>day 1</b>
<b>16</b> <b>Review</b> <b>day 2</b>	<b>17</b> <b>Review</b> <b>day 3</b>	<b>18</b> <b>Finals</b>	<b>19</b> <b>Finals</b>	<b>20</b> <b>Finals</b>

## 5.3 day 1 - Slope-Intercept Form of a Linear Equation

### Target 5B

December 5, 2013

Goals:	1. Distinguish between Independent and Dependent variables.
SWBAT	2. Identify the parts of the Slope-Intercept Form of a linear equation.
	3. Given the slope and y-intercept of a line, create the equation of the line in the Slope-Intercept Form.

### 5.3 day 1 - Slope-Intercept form of a Line Target 5B

Goal	1. Distinguish between Independent and Dependant variables.
Types of Variables:	<p><u>Independent</u> vs. <u>Dependant</u></p> <p>In a relationship between variables, the <u>DEPENDANT</u> variable changes in response to another variable, the <u>INDEPENDANT</u> variable.</p> <p>Identify the independent variable and dependant variable for each.</p> <p>1. ) <i>On a cell phone bill, you are charged \$0.10 for each text you send.</i></p> <p>Independent: <u>#TEXTS</u>                      Dependant: <u>\$</u></p> <p>2. ) <i>The amount of toothpaste in a tube decreases each time you brush your teeth.</i></p> <p>Independent: <u>#TIMES YOU BRUSH YOUR TEETH</u>                      Dependant: <u>AMOUNT OF TOOTHPASTE</u></p>

## 5.3 day 1 - Slope-Intercept form of a Line Target 5B

Goal 2. Identify the parts of the Slope-Intercept Form of a linear equation.

Formula:  $y = mx + b$  Where  $m$  = slope and  $b$  = y-intercept

Recall: - slope is the direction (steepness) of a line.

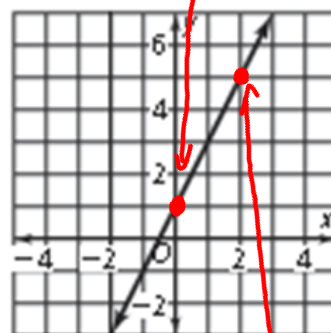
y-intercept - where the line hit (crosses) the y-axis.  $(0,1)$

Example:

$$\begin{array}{r} (0,1) \\ (2,5) \\ \hline -2 \quad -4 \\ \hline -2 \end{array} = \frac{-4}{-2} = 2$$

$$m = +2 \quad b = 1$$

$$\text{Equation: } y = 2x + 1$$



Example: Name the slope and the y-intercept for each equation.

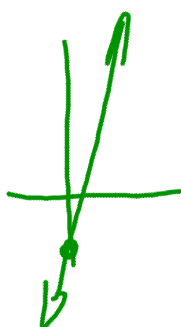
$$y = mx + b$$

$$1.) y = 3x - 4$$

$$m = 3 \quad b = -4$$

$$2.) y = \frac{-3}{4}x - 8$$

$$m = \frac{-3}{4} \quad b = -8$$



$$m = -2 \quad b = 3$$

$$y = -2x + 3$$

## 5.3 day 1 - Slope-Intercept Form of a Linear Equation

### Target 5B

December 5, 2013

Goal 3. Given the slope and y-intercept of a line, create the equation of the line in the Slope-Intercept Form.

Example: Write the equation of a line in slope-intercept form given the following slope and y-intercept.

3.)  $m = -3, b = 7$  Equation:  $y = -3x + 7$

4.)  $m = \frac{2}{3}, b = 8$  Equation:  $y = \frac{2}{3}x + 8$

5.)  $m = -\frac{5}{6}, b = 0$  Equation:  $y = -\frac{5}{6}x + 0$   
 $y = -\frac{5}{6}x$

6.)  $m = 7, b = -2$  Equation:  $y = 7x - 2$

Example: Find the values for y given the following x value and equation.

7.)  $y = 6x + 8$   $x = -2, 0, 2$

x	$y = 6x + 8$	y
-2	$y = 6(-2) + 8$	-4
0	$y = 6(0) + 8$	8
2	$y = 6(2) + 8$	20

$(-2, -4)$   
 $(0, 8)$   
 $(2, 20)$